

CLAIMS

We claim:

- 3 1. A pectin comprising soy pectinaceous material having a lightness index above about
4 85 L.
- 1 2. The pectin of claim 1, wherein the lightness index is above about 87 L.
- 1 3. The pectin of claim 1, wherein the lightness index is above about 90 L.
- 1 4. The pectin of claim 1, wherein the pectin comprises about 40 wt.% galacturonic acid,
2 about 16 wt.% of a mixture of xylose and mannose, about 8 wt.% galactose, about 1.5 wt.%
3 rhamnose, about 4 wt.% glucose, about 2.5 wt.% arabinose, about 1.5 wt.% fucose, about 1
4 wt.% Cellulose, about 8 wt.% protein and about 2% moisture.
- 1 5. The pectin of claim 1, wherein the pectin has about 40% by weight galacturonic acid
2 and about 16% by weight of a mixture of xylose and mannose.
- 1 6. The pectin of claim 1, wherein the pectin has about 25% by weight of esterified sugar
2 residues and a methoxyl content of about 1.5%.
- 1 7. The pectin of claim 1, wherein the pectin has a degree of acetylation of about 25%.
- 1 8. The pectin of claim 1, wherein the pectin has a molecular weight of about 21 kD.
- 1 9. The pectin of claim 1, wherein the pectin has an AGA purity of about 55%.
- 1 10. The pectin of claim 1, wherein the pectin has an AGA purity above 60%.

1 11. A method for producing soy pectin comprising the steps of:
2 extracting a soybean hull/hypocotyl mixture in a mineral acid at an elevated
3 temperature and for a time and at a pH sufficient to extract a pectinaceous soy material from
4 the mixture;
5 cooling the extracted pectinaceous material and raising the pH;
6 separating the extract from the solid residue;
7 precipitating the pectinaceous material in an alcohol; and
8 drying the pectinaceous material to form soy pectin.

1 12. The method of claim 11, further comprising the step of:
2 pre-washing the hull/hypocotyl mixture in the presence of a solvent for a time and
3 temperature sufficient to produces a pre-extraction mixture has a percent transmittance above
4 about 35% on liquid .

1 13. The method of claim 12, further comprising the step of:
2 soaking the washed hull/hypocotyl mixture in the presence of a solvent for a time,
3 temperature and pH sufficient to expand the cellular matrix of the washed mixture.

1 14. The method of claim 11, further comprising the step of:
2 post-washing the precipitated pectinaceous material with pressing in the presence of
3 a solvent sufficient number of times to wash the material.

1 15. The method of claim 14, wherein the post-washing step comprising:
2 three 70% 2-propanol washings and two 100% 2-propanol washings with pressing
3 after each washing.

1 16. The method of claim 14, further comprising the step of:
2 slowly evaporating the 2-propanol from the pectinaceous material for a time sufficient
3 to enhance the whiteness of the pectin product.

1 17. The method of claim 11, further comprising the step of:
2 evaporating the pectinaceous material under a vacuum at an elevated evaporation
3 temperature.

1 18. The method of claim 11, further comprising the step of:
2 grinding the pectin product.

1 19. A food stuff comprising a soy pectinaceous material having a lightness index above
2 about 85 L.

1 20. A food additive comprising a soy pectinaceous material having a lightness index
2 above about 85 L.